



Proposal for a universal Islamic moon calendar submitted by Hijri Committee of India,  
7/858 B, AWH Building, S. M. Street, Kozhikode- 673001. INDIA  
(E-mail: [editor@mooncalendar.in](mailto:editor@mooncalendar.in) ; [editorhijri@gmail.com](mailto:editorhijri@gmail.com) )

Dear Brothers in Islam

Assalaamu Alaikkum wa Rahmatullaahi wa Barakaathu hu

Hijri Committee of India is in complete agreement with the point raised by many prominent scholars and Muslim leaders that it is totally contrary to the spirit, essence and traditions of a great religion, Islam based on *Tawheed* (Oneness of the Almighty Allah), that Islamic countries and in fact even countries that are located in the same geographic boundaries start fasting on different days and observe the Eid on different days.

Eidul Ad'ha of 1435 was celebrated on 4 days of the week (Saturday, Sunday, Monday and Tuesday) within India itself. The worst part was that on the very next day of Eid i.e., Wednesday the world witnessed a Lunar Eclipse!! What a tainted picture of Islam these people are presenting to the world with a "calendar" which shows Lunar Eclipse on 11th day of the lunar month !!! Kindly ponder over on such an ambiguity.

As everyone unanimously agree, the calendar in Islam is in mess and the date menace is hovering us since for so long and Muslims across the globe are reeling under utter chaos and confusion in deciding even sacred dates and religious affairs like fasting, feasting and of course for Hajj despite the astronomy has grown to such an extend today that we are able to bring the moon phases, percentage of its illumination, angle of elongation from the sun, Eclipse data for many years in advance, rising and setting time of sun and moon at any given location etc. into even a mobile device.

We, the members of Hijri Committee of India have meticulously pursued this subject since more than three decades, going deep into the length and breadth of the subject. We have been conscientiously observing all the phases of the moon throughout and keeping log of our observations for many years.

Alhamdulillah, today we are able to present an error-free calendar, which is fully in compliance with Noble Qur'an and Sunnah, before the world with all its minute details of true interpretation of its mentioning in the Quran and Rasullah's صلی اللہ علیہ وسلم practice with a loud endorsement in Astronomy.

Alhumdulillah, we have published yearly calendars for the past 16 years and these calendars showing daily moon-phases tallies exactly with dates/Moon Age and can be used globally.

Setting up a wrong criteria and debating on it, is primarily causing endless and fruitless discussions

on the matter among the scholars all around, which is not going to yield any result or solution till the Hour is established. Muslims are obliged to follow the hierarchy of Islam based on Qur'an, Sunnah and also the established facts of Astronomy. The Qur'an is very vocal about Astronomy with innumerable verses on this subject. As all will agree, it would be prudent if Scholars who don't know the basics of Astronomy should not try to handle this subject and they are entitled to take advice from the astronomers if they are in doubt.

Let us brief the astronomy of moon and its lunation in the light of Noble Qur'an and Sunnah with undeniable facts that scientists have been able to formulate the movements of the key celestial bodies like Earth, Sun and the Moon whose relative position determines the date and time on earth, since all the three heavenly bodies are running its course with precise accuracy and discipline (55:5).

الشَّمْسُ وَالْقَمَرُ بِحُسْبَانٍ

The sun and the moon [move] by precise calculation, (Ar-Rahman 55:5)

Let's brief the topic in the following heads.

## 1. Calendar.

Almighty Allah speaks about a calendar in His book which He had established on the day one of His creation of the universe. This is referred to as the right religion and we have been proscribed or prohibited to err on this as stated in the verse 9:36 (See also 2:189).

إِنَّ عِدَّةَ الشُّهُورِ عِنْدَ اللَّهِ اثْنَا عَشَرَ شَهْرًا فِي كِتَابِ اللَّهِ يَوْمَ خَلَقَ السَّمَاوَاتِ وَالْأَرْضِ مِنْهَا أَرْبَعَةٌ حُرْمٌ ۗ ذَٰلِكَ الدِّينُ الْقَيِّمُ ۗ فَلَا تَظْلِمُوا فِيهِنَّ أَنْفُسَكُمْ ۗ وَقَاتِلُوا الْمُشْرِكِينَ كَافَّةً كَمَا يُقَاتِلُونَكُمْ كَافَّةً ۗ وَاعْلَمُوا أَنَّ اللَّهَ مَعَ الْمُتَّقِينَ

Indeed, the number of months with Allah is twelve [lunar] months in the register of Allah [from] the day He created the heavens and the earth; of these, four are sacred. That is the correct religion, so do not wrong yourselves during them. And fight against the disbelievers collectively as they fight against you collectively. And know that Allah is with the righteous [who fear Him]. (At-Tawba 9:36)

The basic unit of any calendar is the date and it should have the day-date congruence. Since Allah speaks to the mankind on calendar and that moon phases are the dates for whole mankind, we cannot segregate it into different regions and religion. If a day can be observed across the world in 24 hours time, the date corresponding to the day should also disappear from the earth along with the day. Consider the example of Friday, which starts west of IDL and ends at East of IDL in a sequenced manner, the date. If it is 1st Shawwal then it also should end at this point on earth, in the same manner. This is also taught by Rasulallah ﷺ as stated in At-Tirmidhi, Book 8, Hadith 16

"الصَّوْمُ يَوْمَ تَصُومُونَ وَالْفِطْرُ يَوْمَ تُفْطِرُونَ وَالْأَضْحَى يَوْمَ تُضْحُونَ"

Abu Hurairah narrated that the Prophet ﷺ said: "The fast is the day the people fast, the breaking of the fast is the day the people break their fast, and the sacrifice is the day the people sacrifice."

"Annaas" here refers to the whole mankind on the earth and it doesn't segregate into any country or Kingdom. Ironically, it is often found that India who is ahead of Saudi Arabia (KSA) by two and a half hours always celebrate Eid one or two days behind them, even though India performs every prayer by same time ahead of KSA every day.

There is another school of thought, who seems widely accepted by the Muslims, mistakenly; that the month begins after the crescent is seen after sunset. The conjunction, which demarcates the two lunations, will not have any significance then and a date is not required.

Rasulullah ﷺ had never attempted in his life time to sight the setting of the waxing crescent in the evening at west, to determine the beginning of the month, but instead he ﷺ always tried to understand when the current month is going to end, by watching all the phases meticulously, the first 7 waxing & last 7 waning crescents in particular and precisely the rising of the last visible waning crescent in the morning which is substantiated in the following Hadeeth (Muslim: Book 6, Hadith 2386)

حَدَّثَنِي هَارُونَ بْنُ عَبْدِ اللَّهِ، وَحَجَّاجُ بْنُ الشَّاعِرِ، قَالَا حَدَّثَنَا حَجَّاجُ بْنُ مُحَمَّدٍ، قَالَ قَالَ ابْنُ جُرَيْجٍ أَخْبَرَنِي أَبُو الزُّبَيْرِ، أَنَّهُ سَمِعَ جَابِرَ بْنَ عَبْدِ اللَّهِ، - رَضِيَ اللَّهُ عَنْهُمَا - يَقُولُ اعْتَزَلَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ نِسَاءَهُ شَهْرًا فَخَرَجَ إِلَيْنَا صَبَاحَ تِسْعٍ وَعِشْرِينَ فَقَالَ بَعْضُ الْقَوْمِ يَا رَسُولَ اللَّهِ إِنَّمَا أَصْبَحْنَا لِتِسْعٍ وَعِشْرِينَ. فَقَالَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ " إِنَّ الشَّهْرَ يَكُونُ تِسْعًا وَعِشْرِينَ ". ثُمَّ طَبَّقَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ يَدَيْهِ ثَلَاثًا مَرَّتَيْنِ بِأَصَابِعِ يَدَيْهِ كُلِّهَا وَالثَّلَاثَةَ بِتِسْعٍ مِنْهُ

Abu Zubair is reported to have heard Jabir b. 'Abdullah (Allah be pleased with both of them) as saying: The Apostle of Allah (saw) separated himself from his wives for a month. (His wives said:) He came to us on the morning of the twenty-ninth. Upon this some, of the people said: It is the morning of twenty- ninth (according to our calculation). Upon this the Messenger of Allah (saw) said: The month may also consist of twenty-nine days. The Apostle of Allah (saw) then flapped his bands thrice, twice with all the fingers of both his hand (to indicate twenty-nine) and by the third time with nine (fingers).

Though we can easily perceive any date by the appearance of the moon, we should have a basic criterion and benchmark to have a calendar to reckon the ages as said in the Noble Quran (10:5). We are asked to calculate and tabulate the data to know the number of years, ahead and behind, and Allah has made the movements of the key celestial bodies under our purview of knowledge, in order that we may able to calculate and tabulate the time and date which the ancient people didn't know, as was said by the Prophet ﷺ in the following Hadeeth (Bukhari, Vol. 3, Book 31, Hadith 137

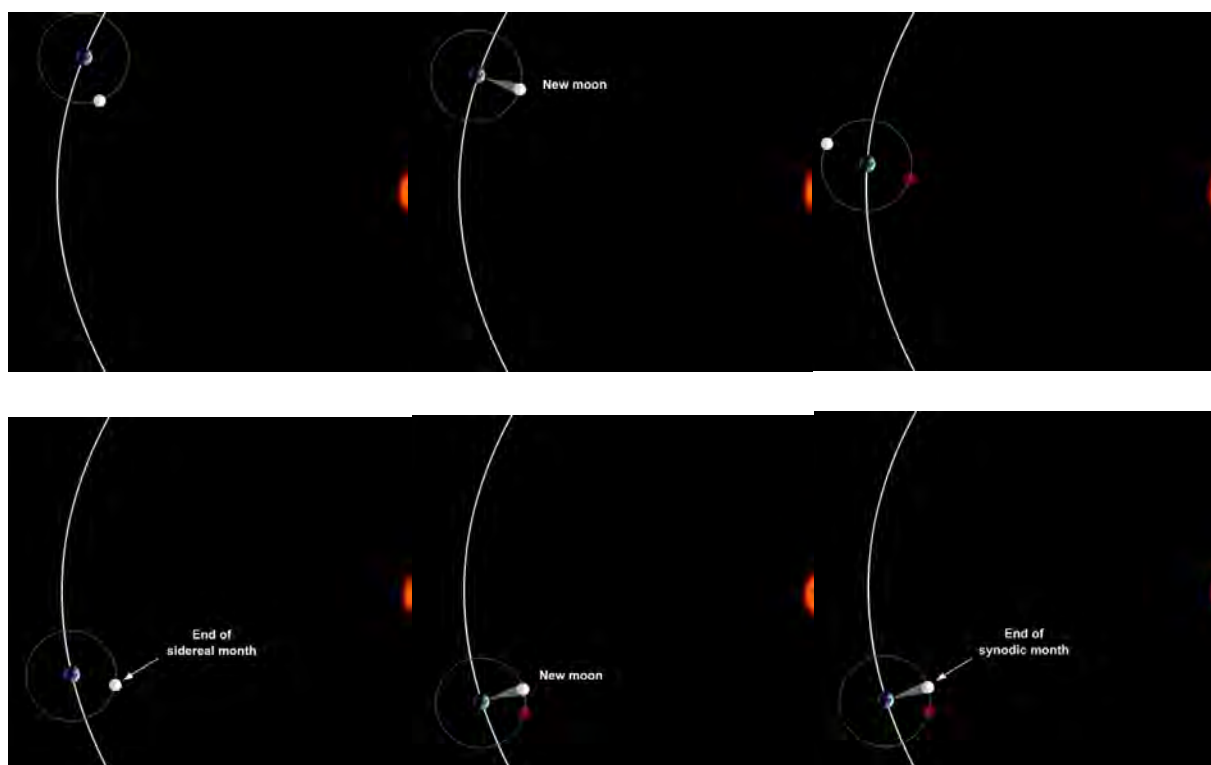
حَدَّثَنَا آدَمُ، حَدَّثَنَا شُعْبَةُ، حَدَّثَنَا الْأَسْوَدُ بْنُ قَيْسٍ، حَدَّثَنَا سَعِيدُ بْنُ عَمْرٍو، أَنَّهُ سَمِعَ ابْنَ عَمَرَ رَضِيَ اللَّهُ عَنْهُمَا. عَنِ النَّبِيِّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ أَنَّهُ قَالَ " إِنَّا أُمَّةٌ أُمِّيَّةٌ، لَنَكْتُبُ وَلَا نَحْسِبُ الشَّهْرُ هَكَذَا وَهَكَذَا ". يَعْنِي مَرَّةً تِسْعَةً وَعِشْرِينَ، وَمَرَّةً ثَلَاثِينَ.

Narrated Ibn `Umar (RA): The Prophet ﷺ said, "We are an illiterate nation; we neither write, nor know accounts. The month is like this and this, i.e. sometimes of 29 days and sometimes of thirty days."

## 2. Lunation

The moon orbits around the earth in an peculiar elliptical orbit at a speed of 3683 km/h which takes an average of 27 days 7 hours 43 minutes and 4.3 seconds to complete one revolution around the earth with respect to a distant star which is called a sidereal month. Since we are taught to follow 29/30 days in a month by Rasulallah ﷺ, sidereal month has got no relevance in Islam as far as calendar is concerned. In a sidereal month, there is no phase for the moon coupled with a particular date and it lasts only 27.322 days.

<http://www.sumanasinc.com/webcontent/animations/content/sidereal.html>



**As per the teachings of Islam, it is the Synodic Month, with an average duration of 29.5 days, which has to be followed.**

Months are 29 or 30 days. It is mentioned in one of the hadiths in Bukhari, Book 68, Hadith 51;

حَدَّثَنَا أَبُو هُرَيْرَةَ، حَدَّثَنَا جَبَلَةُ بْنُ سُحَيْمٍ، سَمِعْتُ ابْنَ عُمَرَ، يَقُولُ قَالَ النَّبِيُّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ "الشَّهْرُ هَكَذَا وَهَكَذَا وَهَكَذَا يَعْنِي ثَلَاثِينَ، ثُمَّ قَالَ " وَهَكَذَا وَهَكَذَا وَهَكَذَا " يَعْنِي تِسْعًا وَعِشْرِينَ يَقُولُ، مَرَّةً ثَلَاثِينَ وَمَرَّةً تِسْعًا وَعِشْرِينَ.

Narrated Ibn `Umar (RA): The Prophet ﷺ (holding out his ten fingers thrice) said, "The month is thus and thus and thus," namely thirty days. Then (holding out his ten fingers twice and then nine fingers) he said, "It may be thus and thus and thus," namely twenty nine days. He meant once thirty days and once twenty nine days.

Movement of the moon further ahead on its course, makes it fall in the elliptical longitude of the sun causing the conjunction with the sun as seen from the earth which we call it as 'New Moon' or Geo-centric Conjunction, in Astronomy and the time taken by the moon to travel from one new moon to another is called a Synodic month, which we otherwise call as a lunation.

Since the moon is orbiting in an peculiar elliptical orbit, the length of any synodic month can vary from 29.26 to 29.8 days due to the disturbing effect of the sun's gravity on the moon's peculiar orbit; thus making a mean synodic month of 29 days 12 hours 44 minutes and 3 seconds (29.530588 days) which ratifies the above hadith of having 29/30 days in a lunar month.

When the moon is in conjunction with the sun, the hemisphere away from the earth (far side) is totally lit and the dark side of the moon (near side) faces the earth. So we cannot see any crescent on a conjunction day since she has zero angle of elongation from the sun as seen from the earth.

The moon is in synchronous rotation with the earth we are never able to see the far side of the moon from the earth.

The moon which travels approximately 12.2 degree a day if we assume a 360 degree revolution around the earth during her lunation, exhibits its first crescent to the earth, after sun-set, on the next day of the conjunction (the first day of a lunar month). Although, the sun begins to illuminate the near side of the moon immediately after conjunction, it is always difficult to see the crescent due to her proximity to the sun and the poor credentials like small angle of deviation from the sun and a very low percentage of illumination. So the first crescent is always seen on the evening of the first day after sunset. Many Qur'an Tafsirs have explained this phenomenon.

The sun and the moon rise almost at the same time on a conjunction day and moon sets after the sun in the evening of the same day as it lags during its course at the rate of 50 minutes (12.2.degree) per day. The earth rotates its axis from West to East and the moon travels around the earth causing it to lag behind the Sun every day which causes different mansions for her. These mansions (Manaazil) have a clear significance to understand the dates pertaining to the week days which doesn't repeats by itself during a lunation since she has a unique stage every day (10:5).

هُوَ الَّذِي جَعَلَ الشَّمْسُ ضِيَاءً وَالْقَمَرَ نُورًا وَقَدَرَهُ مَنَازِلَ لِتَعْلَمُوا عَدَدَ السِّنِينَ وَالْحِسَابَ ۗ مَا خَلَقَ اللَّهُ

ذَلِكَ إِلَّا بِالْحَقِّ يُفَصِّلُ الْآيَاتِ لِقَوْمٍ يَعْلَمُونَ

It is He who made the sun a shining light and the moon a derived light and determined for it phases - that you may know the number of years and account [of time]. Allah has not created this except in truth. He details the signs for a people who know (Yunus 10:5)

The above verse can be explained as four quarters of its lunation.

Waxing Crescents, First Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, Last Quarter, Waning Crescents & New Moon.

After the Last Quarter, if we keep watching the waning crescents further at dawn, we can see that she becomes thinner and thinner every day and rises closer and closer to the Eastern horizon until she attains the shape of an 'old withered date stalk' which would be the last visible phase of the moon for a particular month which Noble Qur'an terms it as 'Urjoonal Qadeem'(36:39).

وَالْقَمَرَ قَدَّرْنَا مَنَازِلَ حَتَّىٰ عَادَ كَالْعُرْجُونِ الْقَدِيمِ

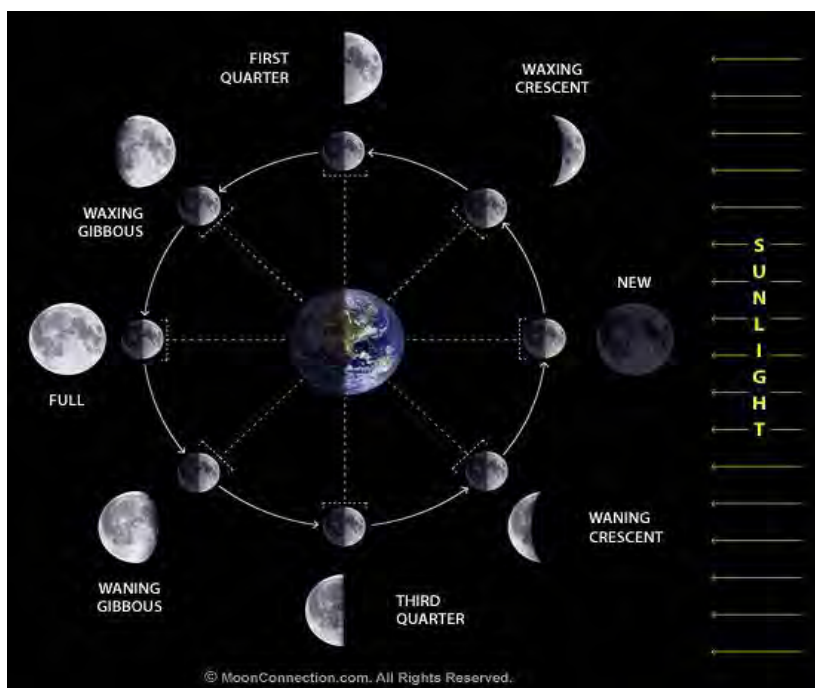
And the moon - We have determined for it phases, until it returns [appearing] like the old date stalk. (Ya-Sin 36:39)

The above verse beautifully explains how a month in Allah's calendar ends. If we keep on watching the moon in the last quarter, the position (manzil) of the moon changes and its shape (phase) gets smaller and smaller day by day, and finally, one day before the Day of Conjunction, we can see the moon which will be very thin and very close to the Eastern horizon as al-urjoonalqadeem. This is a clear indication that, on the next day the waning moon will not be seen (being a conjunction day). The new month begins starting from the day after conjunction day.

In Tafsir Ibn Kathir while explaining verse 36:39, Imam (Rah) says:

<<"As for the moon, Allah has decreed that it should pass through different phases. At the beginning of the month, the moon appears small when it rises. It gives off little light, then on the second night its light increases and it rises to a higher position, and the higher it rises the more light it gives -- even though it is reflected from the sun -- until it becomes full on the fourteenth night of the month. Then it starts to wane until the end of the month, until it appears like the old dried curved date stalk. Ibn `Abbas, may Allah be pleased with him, said, "This is the original stem (which connects the bunch of dates to the tree).">>

This narration can be dramatically shown as follows.



So, as far as an observer is concerned, the phases in the first half of the month can be seen in the first half of the night and similarly, the phases in the second half, in the second half of the night with exactly opposite phenomenon like shape of the moon, rising and setting time etc. which is perceptible from the diagram above.

### 3. Conjunction.

There is no visible phase for the moon next day of “*al-Urjoonul Qadeem*” since it is a conjunction day when the dark side of the moon faces the earth and the far side is fully lit.

We once again quote here Imam Ibn Kathir’s explanation on Quran verse 71:16:

*“Allah has created the seven heavens in tiers and has made the moon a light therein, and made the sun a lamp) meaning, He made a distinction between them (the sun and moon) in reference to their lighting. He made each one of them in a set manner with a distinct quality so that the night and day may be known. They (the night and day) are known by the rising and setting of the sun. He also determined fixed stations and positions for the moon, and He made its light vary so that sometimes it increases until it reaches a maximum, then it begins to decrease until it is completely veiled. This shows the passing of months and years”.*

Furthermore, Tafsir Ibn Kathir explains “*Wal Qamara Kadarunaahu manaazila*”(36:39) as; <<“*And the moon, We have decreed for it stages,) meaning, `We have caused it to run in a different orbit, from which passing of the months can be deduced, just as night and day are known from the sun.'*>>

The above quotes would suffice to prove that as per Sharia, the day of conjunction is the last day of a month. It may also be noted that Solar Eclipse occurs only on the day of conjunction and it marks the end of a lunar month. The sun then again starts illuminating the near side of the moon since after conjunction and the two phases before and after conjunction gives an evident mandate that



the month change happens on a conjunction day, as the horns of two phases – Waning & Waxing – point to opposite directions.

#### 4. Phases.

Apart from the stages that moon has got during its lunation, it also has phases during the course, which is also unique every day and is in tandem with her stages. Noble Qur'an unequivocally says that *"these phases are dates for mankind and for hajj"* (2:189).

يَسْأَلُونَكَ عَنِ الْأَهْلِةِ ۗ قُلْ هِيَ مَوَاقِيتُ لِلنَّاسِ وَالْحُجِّ

They ask you concerning the new moons (Literally: crescents). Say, "They are fixed times for mankind, and (for) the Pilgrimage." (Translation Dr.Ghali)

So, the phase and her corresponding stage for each day collectively give an exact clue of the date for that day of the week as explained beautifully by the Qur'an. Manaazil (mansions/stages) are nothing but moon age and the Ahillah are the phases, which are Angle of Deviation and Percentage of Illumination, respectively in Astronomy.

The different translations of the Qur'an render "Ahillah" to mean as "new moons" and by this, they refer to the first visible crescent in the beginning of every month. We have examined Quran translations in eight languages. All give the same meaning. In fact, Ahillah does not mean 'new moons'. Tafseers Tabari, Ibn Kathir, Kurtubi etc give clear and correct explanation about "Ahillah".

The word 'Ahillah' is used in Noble Qur'an only once in verse 2:189. It is not used again anywhere else in Quran. Even though Ahillah is plural of Hilaal, the Qur'an does not use Hilaal anywhere in it. If the purpose was to identify a particular crescent that appears initially every month, it was only required to mention "Al-Hilal" (i.e., a phrase like, 'they ask you about Al hilal', because by using the word "The Hilal" alone it could refer to a particular Hilal repeating in all 12 months. In reality only one moon exists and therefore the word Ahilla can only mean 'different shapes of the moon seen to us in different stages of its travel'. We call them 'phases' in English (refer to Qur'an verses 10:5, 36:39)

The verse 2:189 also mentions about 'Mawaaqeeet' which is plural of 'meeqaat' found in many places in Noble Qur'an. It means date. *"Inna youma fasli kaana meekathan"* (*"the day of decision is a fixed date"*(78:17). Therefore, the reference here clearly denotes to a 'fixed' and 'determined' date. So, *"Hiya mawaakeethu linnasi wal Hajj"* means *"they are dates for people and Hajj"*. This directs us that we should use the phases of the moon for our dates in all purposes, whether civil or religious.

#### 5. INTERNATIONAL DATE LINE (IDL) :

For any calendar to be useful, there must be a place in the world, from where a day should start.



International Date Line (IDL) which passes through the middle of Pacific ocean through 180 degree longitude has been considered as the demarcation point on the globe since ancient times where the Day and Date changes takes place.

It is at this place the Zuhr prayer changes to Jummah every 7<sup>th</sup> day. Fortunately, the Qibla also changes at the same place though it is not exactly opposite side of Ka'ba, which upholds the significance of the IDL.

12 noon at IDL corresponds to the 12 UT (mid night) which again corresponds to the dawn at Makkah. All of these facts can be considered as the bench mark to fix the demarcation point for a day since Fajr is considered as the demarcation point of a civil day. If conjunction happens before 3 a.m at Makkah (24:00 UT), the next day should be the first day of the new month which is the base criterion of a conjunction-based-calendar.

There is another school of conjunction-based-calendar in which they take 3 p.m at Makkah (12 GMT) as the bench mark which cannot be true since the day is only half way mark at 12 GMT. Since the day ends only at 24 GMT, we should consider the full day as we do for every day. It is inappropriate to consider a half-day only at the end of the month in order to manipulate the true essence of a calendar.

There is a popular misconception that the day starts at New Zealand side because of the International Dateline (IDL) fixed by the British and that IDL has no basis in Islam. There is no substance for such an argument because the existing IDL is universally accepted due to the geographical specialty of the region that makes the dateline to go mainly through the sea. IDL is the place where Jummah prayer starts in the world and as the day of Friday progresses we go westward and within 24 hours of the first Jummah prayer, the whole world will finish praying it. While the Jummah is prayed on the West of IDL, people will be praying Zuhar almost at the same time, on the east of this line. Therefore, there is no impairment to accept the current dateline as the dateline for an Islamic calendar also.

In lunar calendar, when it is said that a new month starts the next day immediately after the day of conjunction, some hypothetical questions could be asked like,

- 1) the possibility of people in the eastern region close to IDL will need to enter a new month even before conjunction happens in the world.
- 2) The people on the western region close to IDL have to wait one more day even after observing the conjunction on a particular day.

Here we must note one point. The 'day' and 'date' of conjunction is always recorded similar to the birth of a person in the world. For instance, the Prophet ﷺ was born in Makkah on a Monday. However, this particular moment may be a different day for people in another part of the world like USA. But, we know that the day of birth is recorded as Monday everywhere in the world with reference to day (Monday) in relation to the place of birth.

Based on the above, as an example, if moon birth (conjunction/new moon) occurs over New Zealand side of IDL on a Friday, and then the day of conjunction will be Friday even though the

people across the IDL on Canadian side are on Thursday. We must keep in mind that the time of conjunction is not the one that determines the beginning of new month, but the Universal day of conjunction with reference to the place of conjunction which should determine the first day of new month. In the above case, the new month begins on Saturday for all in the world as the day of conjunction is Friday with reference to the place (Geographical Position – GP) of conjunction.

If moon birth (conjunction/new moon) occurs over Canadian side of IDL on a Friday, and then the day of conjunction will be Friday even though the people across the IDL on New Zealand side are on Saturday. Here also, the actual day of conjunction is Friday with reference to the place of conjunction. The people on the West side of IDL have completed all the 5 Mandatory prayers of Friday and they have to enter into Fajr of Saturday, without fail and therefore, people in the Western side of IDL (New Zealand) has to enter new month too even before the actual conjunction takes place on the other side of the IDL.

In all cases, it is to be clearly noted that, everyone enters into the new month only on the next day after the “day of conjunction” with reference to the place (GP) of conjunction.

It is admitted that the current IDL was altered certain times in the past by certain countries/ islands by jumping across to the other side of the IDL. This was done by individual countries/ islands for commercial and/or political benefits. Any country/island that are close to the IDL, renaming their days and dates cannot go against the concept of IDL and their individual decision has no bearing on other countries. Nor the Jumma is prayed on any other day than the actual Friday, even if it is renamed by any other name.

Similarly, some Muslims insist that the moon shows different phases to people from different regions on a single day of the week. They are totally on the wrong track. The phases of the moon will be the same all over the world at a particular moment. Please click the link below to see the photos of Full Moon taken on Thursday, 6th of November, from different countries:

<https://www.facebook.com/EarthSky/photos/a.61619521852.81951.36709031852/10152333159336853/?type=1>

Many have a misconception that the phenomenon of conjunction lasts for one whole day or 1½ days or even 2 days !!!!! Such a thought is wrong, no doubt about it.

The phenomenon of conjunction occurs in an "instant". Please note that the orbital speed of the Earth around the Sun averages about 30 km/s (108,000 km/h) and the orbital speed of the Moon around the Earth is 1.022 Km/s (3,680.5 km/h). The center points of Earth (which moves at 30 Kms per second) and that of Moon (which moves at 1 km per second) and that of Sun comes in a straight line just for an "instant". The very next moment, this alignment gets disturbed and Moon starts moving to the other side of the Sun. After this "instant" itself, very thin crescent is formed, though invisible to human eye.

The photographs of such crescents were taken, by astronomers using sophisticated equipment, thereby confirming that the new month has been started with birth of hilaal. Such a photograph

taken on the day of Conjunction in Sha'baan (July 8, 2013) at 07:14 UT is available in the following link.

[http://www.astrophoto.fr/new\\_moon\\_2013july8.html](http://www.astrophoto.fr/new_moon_2013july8.html)

## 6. Calendar Intercalation.

The dates and months are determined by the astronomical position of celestial bodies as decreed by Allah and any manual interference to alter the same would lead to transposing the date/month which is called intercalation of calendar. Cloud or dust has nothing to do with the beginning of the month and it is not supposed to be fixed ecclesiastically (by priests) or by leaders too.

Adding an extra day to a month of 29 days is of the same crime as we add a day to a 30 days month to make it 31. Allah has fixed the days in each month from the very day of the creation of the universe and has taught the methodology to find out this as we explained above in detail.

So, intercalating even a day or a month are of similar sin by which we are actually trying to alter Allah's creation which is proscribed by Him in the verse 9:37.

إِنَّمَا النَّسِيءُ زِيَادَةٌ فِي الْكُفْرِ ۚ يُضَلُّ بِهِ الَّذِينَ كَفَرُوا يُجَلِّئُونَ عَمَّا وَيَجْرِمُونَهُ عَمَّا لِيُؤَاطُوا عِدَّةَ مَا حَرَّمَ اللَّهُ فَيُحِلُّوا مَا حَرَّمَ اللَّهُ ۚ زَيْنَ لَهُمْ سُوءَ أَعْمَالِهِمْ ۚ وَاللَّهُ لَا يَهْدِي الْقَوْمَ الْكَافِرِينَ

Indeed, the postponing [of restriction within sacred months] is an increase in disbelief by which those who have disbelieved are led [further] astray. They make it lawful one year and unlawful another year to correspond to the number made unlawful by Allah and [thus] make lawful what Allah has made unlawful. Made pleasing to them is the evil of their deeds; and Allah does not guide the disbelieving people. (At-Tawba 9:37)

The above verse confirms the sacredness of the dates and months and therefore, any kind of changes or alteration done would be considered as a grave offence in the sight of Allah since the inviolability of these months and dates are already determined by Allah. Some Muslims justify their folly of starting the months on the wrong day by stating that the above verse stipulates about the intercalation of only months and not dates. They must realize that when Almighty Allah has fixed 12 months in a year, it should be understood that the start of each month too was decreed by Almighty.

NASA has published new moon data for 6000 years and we are now straight away able to prepare the calendar for that much years at least. A calendar for 100 years each ahead and behind is enclosed herewith for your kind perusal.

## 7. Start of a Day in Islam:

For so many centuries we have been made to believe that the Day (24-hour period) in Islam starts at Magrib. Unfortunately, this Jewish tradition crept into our lives.

Noble Qur'an and authentic hadeeths teach us that the day (24 hour period) starts at Fajr and not at Magrib. If this truth is accepted, many of the chaos and confusion with regard to start of Hijri will be over, In Shaa Allah.

Qur'aan verses 2:238, 36:40, 7:54,13:3 and 91:1-4 teach us that the start is from Fajr and not from Magrib.

a)

حَافِظُوا عَلَى الصَّلَوَاتِ وَالصَّلَاةِ الْوُسْطَىٰ وَقُومُوا لِلَّهِ قَانِتِينَ

Guard strictly (five obligatory) As-Salawat (the prayers) especially the middle Salat (i.e. the best prayer - 'Asr). And stand before Allah with obedience [and do not speak to others during the Salat (prayers)]. (Al-Baqara 2:238)

All the mufasireen have said that the "*salaathulwusta*" is Asr prayer. It is reported in Sahih Muslim, Muwatta Maalik, Abu Dawud, Nasaie, Tirmudhiand Musnad Ahmad. If Asr has to be the mid prayer, the day must start at Farjr (dawn) and not at Magrib.

b)

لَا الشَّمْسُ يَنْبَغِي لَهَا أَنْ تُدْرِكَ الْقَمَرَ وَلَا اللَّيْلُ سَابِقُ النَّهَارِ ۚ وَكُلٌّ فِي فَلَكٍ يَسْبَحُونَ

It is not for the sun to overtake the moon, nor does the night outstrip the day. They all float, each in an orbit. (Ya-Sin 36:40)

It is not allowable for the sun to reach the moon, nor does the night overtake the day, but each, in an orbit, is swimming.

"nor does the night outstrip the day" which means that day is the fore runner and night will not outstrip the day. This verse categorically states that 24 hour period in Islam starts at dawn and not at Magrib.

c)

إِنَّ رَبَّكُمُ اللَّهُ الَّذِي خَلَقَ السَّمَاوَاتِ وَالْأَرْضَ فِي سِتَّةِ أَيَّامٍ ثُمَّ اسْتَوَىٰ عَلَى الْعَرْشِ يُغْشِي اللَّيْلَ النَّهَارَ يَطْلُبُهُ حَثِيثًا وَالشَّمْسَ وَالْقَمَرَ وَالنُّجُومَ مُسَخَّرَاتٍ بِأَمْرِهِ ۗ أَلَا لَهُ الْخَلْقُ وَالْأَمْرُ ۗ تَبَارَكَ اللَّهُ رَبُّ الْعَالَمِينَ

Indeed your Lord is Allah, Who created the heavens and the earth in Six Days, and then He Istawa (rose over) the Throne (really in a manner that suits His Majesty). He brings the night as a cover over the day, seeking it rapidly, and (He created) the sun, the moon, the stars subjected to His Command. Surely, His is the Creation and Commandment. Blessed be Allah, the Lord of the 'Alamin (mankind, jinns and all that exists)! (Al-A'raf 7:54)

d)

وَهُوَ الَّذِي مَدَّ الْأَرْضَ وَجَعَلَ فِيهَا رَوَاسِيَ وَأَنْهَارًا ۚ وَمِنْ كُلِّ الثَّمَرَاتِ جَعَلَ فِيهَا زَوْجَيْنِ اثْنَيْنِ ۗ يُغْشِي اللَّيْلَ النَّهَارَ ۚ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِّقَوْمٍ يَتَفَكَّرُونَ

And it is He Who spread out the earth, and placed therein firm mountains and rivers and of every kind of fruits He made Zawjain Ithnain (two in pairs - may mean two kinds or it may mean: of two sorts, e.g. black and white, sweet and sour, small and big, etc.) He brings the night as a cover over the day. Verily, in these things, there are Ayat (proofs, evidences, lessons, signs, etc.) for people who reflect. (Ar-Ra'd 13:3)

In the above 2 verses Allah says "HE brings the night as a cover over the day". It is clearly mentioned that it is the day which is the first part and the night follows and comes to cover the day.

e)

وَالضُّحَىٰ ﴿١﴾ وَاللَّيْلِ إِذَا سَجَىٰ ﴿٢﴾

By the forenoon (after sun-rise); (1) And by the night when it is still (or darkens); (Ad-Dhuha 93:2) Above both verses says that it is the day-time which comes first and not the night.

f)

وَالشَّمْسِ وَضُحَاهَا ﴿١﴾ وَالْقَمَرِ إِذَا تَلَاهَا ﴿٢﴾ وَالنَّهَارِ إِذَا جَلَّاهَا ﴿٣﴾ وَاللَّيْلِ إِذَا يَغْشَاهَا ﴿٤﴾

And by the sun and its brightness; (1) And by the moon as it follows it (the sun); (2) And by the day as it shows up (the sun's) brightness; (3) And by the night as it conceals it (the sun); (4) (Ash-Shams 91)

The above verses also say that it is the sun or day which recedes the moon or night.

#### **From Hadeeth:**

- 1) Witr: A day consists of 5 mandatory prayers. We have been ordered to end them with witr. Hadith also asks us to pray witr between Isha and Fajr (Sahih Bukhari, Sahih Muslim, Tirmidi, Abu Dawud and Nasaee). This also indicates that the day's last farz prayer is Isha and Fajr is the first prayer.
- 2) The Prophet ﷺ used to start Itikaaf from Fajr onwards (Sahih Bukhari, Sahih Muslim, Tirmidi, Abu Dawud, Nasaee and Musnad Ahmad)
- 3) It is also reported in the hadiths that the Prophet ﷺ used to come out of Itikaaf after Fajr on the Eid day. (Tirmidi, Ahmad and Haakim).
- 4) During Haj if a pilgrim cannot be at the Arafah, his Haj is not completed. In an authentic hadith, the Prophet ﷺ has asked a pilgrim to be at Arafah before the Fajr of 10<sup>th</sup> Zul Hijjah so that he has observed the essential part of the pilgrimage of staying at Ararah on the 9<sup>th</sup> Zul Hijjah. This hadith categorically proves that the 24 hour period starts in Islam at Fajr and not at Magrib.

#### **8. Different calculation criteria followed by others:**

It is true that many countries have adopted calculation criteria, some varying with each other, to determine the start of Hijri months. We are giving some of them and also explaining the disadvantages in adopting such criteria:

- 1) ECFR (European Council for Fatwa and Research): Many European countries follow the decision of this organisation. They consider the moon attaining a minimum altitude of  $5^\circ$  and a minimum elongation of  $8^\circ$ .
- 2) Indonesia: Moon to attain a minimum age of 8 hours, an altitude of minimum  $2^\circ$  and a minimum elongation of  $3^\circ$ .
- 3) Libya: The moon must be above western horizon at sunset and also sighting in Saudi.
- 4) Malaysia: Moon must attain a minimum age of 8 hours, an altitude of minimum  $2^\circ$  and an elongation of minimum  $3^\circ$ . A few countries follow Malaysia.
- 5) Turkey: Moon to attain an altitude of a minimum  $5^\circ$  and a minimum elongation of  $8^\circ$  somewhere in the world. Many countries follow Turkey.
- 6) Egypt: Moon birth must be before sunset and moon to set at least 5 minutes after the sunset.
- 7) USA (ISNA/FCNA): Moon must be born before Magrib at Makkah and the moon to set after the sun at Makkah. For Eid al-Adha they depend on Saudi Arabia.
- 8) Saudi Arabia: The conjunction to take place before Magrib at Makkah and moon to set after sun at Makkah.

These are the few criteria employed by others in order to start the new Hijri months through calculation-method. If these are fulfilled the new months are started from the Magrib of the day of conjunction.

If one studies them one can easily understand that almost all are based on either visibility of new hilaal on the West or on fulfilling the usual parameters for establishing the birth of an invisible hilaal or meeting the parameters for a possible sighting of hilaal on the western horizon.

These criteria will not allow us to start the new months on the correct day, throughout the year. On some months these will enable us to start the new month on the correct day (i.e. on the next day following the day of conjunction). But on other months, the actual first day of the new month is lost and the month can be started only on the second day.

These criteria give importance to moon attaining certain age and/or altitude and/or elongation, which takes at least a few hours to lapse after geo-centric conjunction. This all important span of time decides whether the new month is started on the correct day or not.

Only when the geo-centric conjunction takes place earlier than 16:00 UT on an universal day, the moon will attain the required Age of more than 8 hours and/or required altitude and/or required elongation, before the end of the universal day. But on many months conjunction may occur after 16:00 UT and hence these countries have to skip one day and start the new month only after a day. For example if conjunction takes place after 20:00 UT on a Sunday, then the moon cannot attain the set parameters before the end of the universal day (Sunday) and hence these countries will start

the new month only on Tuesday instead of Monday. This results in moon-phases and dates not tallying with each other or in other words, not in compliance with the direction given in verse 2:189.

Whereas, Hijri Calendar, propagated by HCI, keeps the cut-off time as 23:59 UT for the conjunction to take place. Kindly note that 00:00 UT to 23:59 UT synchronises with the local time of 03:00 hr to 02:29 hr of Makkah

## 9. Visibility curves

It is true that many Astronomers like Dr. Khalid Shaukat, Dr. Mohamed Odeh are publishing visibility curves for each month. These are plotted by computing the parameters for a possible sighting of waxing crescent for the first time on the western horizon. This just shows the probability of sighting of hilaal. But cannot give confirmed sighting at all places under the coloured bands. On many occasions these curves proclaimed 100% positive sighting from Polynesian Islands but no one reported any sighting from these regions.

Hence these curves do not serve any purpose in preparing predetermined calendar.

We must remember two points in this regard.

a) The Hilaal seen on the west after sun-set is actually the SETTING moon, which rose on the east already *in the morning*. This moon follows the sun and becomes visible after sun-set. Sahaba (RA) knew about this and they were also aware that the day-light part of the first day is lost if they waited for the hilaal to appear. They were also aware that they will lose the fast of the first day (in case of Ramadaan) and stand to commit the sin of fasting on Eid day (in case of Shawwal) if they waited for the hilaal on the west. Tafsir Ibn Katheer - verses 91:1 and 2 may be referred in this regard.

b) These curves are plotted on an imaginary flat earth surface. The geographic or physical factors like hills, mountains, trees, ridges, altitude of the place, forests etc. are not taken into count. These curves even divide cities and even villages which itself proves that they are not dependable.

## 10. Conclusion:-

The correct method to find out the end of the present month or the start of the new month is to keep watching the moon phases *every day* as Ahillah are dates per 2:189. The moon has waxing and waning phases as it traverses in the sky (10:05) and this movement is accurate and precisely fixed by Allah (55:5). If we keep watching these different phases of the moon, we can easily find out the correct day of the week in which the new month starts. We can observe that, at the last stage of the moon in a month, the illuminated part of the moon becomes thinner and thinner and at last it becomes so thin and so close to the Eastern horizon around Fajr time, which Noble Qur'an 36:39 describes as "al-UrjoonaalQadeem". Seeing this last visible phase, the observer is assured that waning moon will not be seen on the next day. This day is the day of conjunction and it is the last day of the month. This conjunction (new moon) is also a phase of the moon. The new month must start from the fajr of the following universal day, irrespective of the time of conjunction and/or the sunset-moonset difference at Makkah or at anywhere else.



It is also astronomically true that at somewhere in the world, on the universal day of conjunction, the moon sets after the sun, the birth of moon occurs and hilaal gets established though invisible on the day of conjunction itself. Thus starting the new month on the following day is correct as per Sharia too.

An Islamic Calendar has to be a global one and therefore, there shall be only a date for a day globally. Any calendar system which does not follow this simple rule cannot be practiced in our daily life. We should be able to plan all events, local and global, present and future without causing any conflict. In other words, in any calendar system, if a date suddenly changes, due to any reason, such a calendar is useless for the world. Similarly, in a universally applicable calendar, there has to be a dateline where the date and the day changes simultaneously similar like a Friday starts in New Zealand side of dateline and the day of Friday progresses as we go westward. The same concept should be followed in designing a Global Islamic calendar where the Friday will have one Islamic date in every country.

**The concept Hijri Committee has derived from Noble Qur'aan and authentic Hadees is based on considering the universal day in which the conjunction takes place as the last day of the old month. The new month starts at Fajr of the following universal day, irrespective of time of conjunction and/or sunset moonset difference at Makkah or at elsewhere.**

As per this concept, months in Hijri Calendar can be started on the very next day after conjunction. Astronomically, conjunction is the end of Lunar cycle and beginning of new month from the following of day of conjunction tallies with the moon phases and the natural order. This calendar also tallies with Nautical Almanac published by Marine/Naval authorities of various countries.

By following above concept we can tabulate accurate calendars for thousands of years, backwards or forward and can be used globally by everyone without any confusion.

In their Original Umm al-Qura calendar, till 1420H, Saudi Arabia was using the same criteria, which is now being followed by Hijri Committee.

We have enclosed the following for your ready reference:

- a) An eBook with detailed explanation on Qur'aan verses, authentic hadeeths (in support of the calculation method), misinterpretation of hadees, what Qur'aan says on astronomy, Tafsirs supporting pre-determined calendars, etc.
- b) Calendars for the [1436H](#) , [1437H](#) , [1438H](#) , [1439H](#) , [1440H](#)
- c) [Web-link to download 200 years \(1300H to 1500H\) Hijri Calendar](#)
- d) [Web-link to download " 3001 years Hijri Calendar & Converter " software developed by our member, Br Abdullateef SheikUthman al-Omari \(an Islamic Scholar & hardware engineer\) along with Br Mohamad Fahmy of Sri Lanka \(an Excel expert\)](#)
- e) [Copies of Original Umm al-Qura calendar published by Saudi Arabia.](#)

If you require any further clarifications or explanations, please let us know so that we can clear them at the earliest.

We sincerely request all Muslim scientists, scholars and officials to take all efforts to establish an universal Islamic moon calendar for the world (to *obey Allah's command* and to uphold His calendar) for the sake of unity of the Muslim Ummah in the observance of their religious practices and ultimately an absolute divine and natural calendar system for the world.

May Almighty Allaah forgive all our sins, errors and faults and provide all of us with a place in JannathulFirdouse. Aameen

Wassalaam

For HIJRI COMMITTEE OF INDIA

Research Team

HIJRI COMMITTEE OF INDIA  
7/858 B, AWH Building  
S. M. STREET  
KOZHIKODE - 673001. INDIA  
[editor@mooncalendar.in](mailto:editor@mooncalendar.in) ;  
[editorhijri@gmail.com](mailto:editorhijri@gmail.com)  
[www.mooncalendar.in](http://www.mooncalendar.in)

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